STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING
ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/732,914B

Source: IFW16

Date Processed by STIC: 3/13/07

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY
FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT
MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.4.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:
http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):
   U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/10/06

Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION	SERIAL NUMBER 09/732 𝒜/4𝐵

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1 ____ Wrapped Nucleics
Wrapped Aminos — The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor **after** creating it. Please adjust your right margin to .3; this will prevent "wrapping."

2 ____ Invalid Line Length — The rules require that a line **not exceed** 72 characters in length. This includes white spaces.

3 ____ Misaligned Amino Numbering — The numbering under each 5th amino acid is misaligned. Do **not** use tab codes between numbers; use **space characters**, instead.

4 ____ Non-ASCII — The submitted file was **not** saved in ASCII(DOS) text, as **required** by the Sequence Rules. **Please ensure your subsequent submission is saved in ASCII text.**

5 ____ Variable Length — Sequence(s)____contain n's or Xaa's representing more than one residue. **Per Sequence Rules, each n or Xaa can only represent a single residue.** Please present the **maximum** number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.

6 ____ PatentIn 2.0 "bug" — A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. **This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.**

7 ____ Skipped Sequences (OLD RULES) — Sequence(s) _____ missing. If intentional, please insert the following lines for **each** skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
(i)   SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped

Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to **include** the skipped sequences.

8 ____ Skipped Sequences (NEW RULES) — Sequence(s) _____ missing. If **intentional**, please insert the following lines for **each** skipped sequence.
<210> sequence id number
<400> sequence id number
000

9 ____ Use of n's or Xaa's (NEW RULES) — Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of **n** or **Xaa**, and which residue **n** or **Xaa** represents.

10 ____ Invalid <213> Response — Per 1.823 of Sequence Rules, the only **valid** <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is **required** when <213> response is Unknown or is Artificial Sequence

11 ____ Use of <220> — Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)

12 ____ PatentIn 2.0 "bug" — Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

13 ____ Misuse of n/Xaa — "n" can **only** represent a single <u>nucleotide</u>; "Xaa" can **only** represent a single <u>amino acid</u>

RAW SEQUENCE LISTING   DATE: 03/13/2007
PATENT APPLICATION: US/09/732,914B   TIME: 15:43:47

Input Set : N:\efs\03_12_07\09732914B_efs\IVGN251_ST25.txt
Output Set: N:\CRF4\03132007\I732914B.raw

```
 3 <110> APPLICANT: Invitrogen Corporation
 4       Cheo, David
 5       Brasch, Michael A.
 6       Temple, Gary F.
 7       Hartley, James L.
 8       Byrd, Devon R.N.
10 <120> TITLE OF INVENTION: Use of Multiple Recombination Sites With Unique Specificity
   in
11       Recombinational Cloning
13 <130> FILE REFERENCE: IVGN 251.2 CIP
15 <140> CURRENT APPLICATION NUMBER: 09/732,914B
16 <141> CURRENT FILING DATE: 2000-12-11
18 <150> PRIOR APPLICATION NUMBER: 60/169,983
19 <151> PRIOR FILING DATE: 1999-12-10
21 <150> PRIOR APPLICATION NUMBER: 60/188,020
22 <151> PRIOR FILING DATE: 2000-03-09
24 <160> NUMBER OF SEQ ID NOS: 141
26 <170> SOFTWARE: PatentIn version 3.3
28 <210> SEQ ID NO: 1
29 <211> LENGTH: 27
30 <212> TYPE: DNA
31 <213> ORGANISM: Artificial
33 <220> FEATURE:
34 <223> OTHER INFORMATION: attB0
36 <400> SEQUENCE: 1
37 agcctgctt ttttatactaa cttgagc
40 <210> SEQ ID NO: 2
41 <211> LENGTH: 27
42 <212> TYPE: DNA
43 <213> ORGANISM: Artificial
45 <220> FEATURE:
46 <223> OTHER INFORMATION: attP0
48 <400> SEQUENCE: 2
49 gttcagcttt tttatactaa gttggca
52 <210> SEQ ID NO: 3
53 <211> LENGTH: 27
54 <212> TYPE: DNA
55 <213> ORGANISM: Artificial
57 <220> FEATURE:
58 <223> OTHER INFORMATION: attL0
60 <400> SEQUENCE: 3
61 agcctgctt ttttatactaa gttggca
64 <210> SEQ ID NO: 4
65 <211> LENGTH: 27
```

[Handwritten annotations:] attB0 — Invalid Response; attP0 — Invalid Response; attL0 — Same error; (pg.1-5); ← Pls explain source of genetic material. See item #11 on error summary Sheet.

```
66 <212> TYPE: DNA
67 <213> ORGANISM: Artificial
69 <220> FEATURE:
70 <223> OTHER INFORMATION: attR0          Same error
72 <400> SEQUENCE: 4
73 gttcagcttt tttatactaa cttgagc                              27
76 <210> SEQ ID NO: 5
77 <211> LENGTH: 25
78 <212> TYPE: DNA
79 <213> ORGANISM: Artificial
81 <220> FEATURE:
82 <223> OTHER INFORMATION: attB1        Same error
84 <400> SEQUENCE: 5
85 agcctgcttt tttgtacaaa cttgt                               25
88 <210> SEQ ID NO: 6
89 <211> LENGTH: 27
90 <212> TYPE: DNA
91 <213> ORGANISM: Artificial
93 <220> FEATURE:
94 <223> OTHER INFORMATION: attP1          Same error
96 <400> SEQUENCE: 6
97 gttcagcttt tttgtacaaa gttggca                             27
100 <210> SEQ ID NO: 7
101 <211> LENGTH: 27
102 <212> TYPE: DNA
103 <213> ORGANISM: Artificial
105 <220> FEATURE:
106 <223> OTHER INFORMATION: attL1          Same error
108 <400> SEQUENCE: 7
109 agcctgcttt tttgtacaaa gttggca                            27
112 <210> SEQ ID NO: 8
113 <211> LENGTH: 25
114 <212> TYPE: DNA
115 <213> ORGANISM: Artificial
117 <220> FEATURE:
118 <223> OTHER INFORMATION: attR1          Same error
120 <400> SEQUENCE: 8
121 gttcagcttt tttgtacaaa cttgt                              25
124 <210> SEQ ID NO: 9
125 <211> LENGTH: 25
126 <212> TYPE: DNA
127 <213> ORGANISM: Artificial
129 <220> FEATURE:
130 <223> OTHER INFORMATION: attB2          Same error
132 <400> SEQUENCE: 9
133 acccagcttt cttgtacaaa gtggt                              25
136 <210> SEQ ID NO: 10
137 <211> LENGTH: 27
138 <212> TYPE: DNA
```

See item #11 on error 27 Summary Sheet.

RAW SEQUENCE LISTING   DATE: 03/13/2007
PATENT APPLICATION: US/09/732,914B   TIME: 15:43:47

Input Set : **N:\efs\03_12_07\09732914B_efs\IVGN251_ST25.txt**
Output Set: **N:\CRF4\03132007\I732914B.raw**

[handwritten: NSAME errors 27]

```
139 <213> ORGANISM: Artificial
141 <220> FEATURE:
142 <223> OTHER INFORMATION: attB2
144 <400> SEQUENCE: 10
145 gttcagcttt cttgtacaaa gttggca
148 <210> SEQ ID NO: 11
149 <211> LENGTH: 27
150 <212> TYPE: DNA
151 <213> ORGANISM: attL2
153 <400> SEQUENCE: 11
154 acccagcttt cttgtacaaa gttggca                              27
157 <210> SEQ ID NO: 12
158 <211> LENGTH: 25
159 <212> TYPE: DNA
160 <213> ORGANISM: Artificial
162 <220> FEATURE:
163 <223> OTHER INFORMATION: attR2
165 <400> SEQUENCE: 12
166 gttcagcttt cttgtacaaa gtggt                                25
169 <210> SEQ ID NO: 13
170 <211> LENGTH: 22
171 <212> TYPE: DNA
172 <213> ORGANISM: Artificial
174 <220> FEATURE:
175 <223> OTHER INFORMATION: attB5
177 <400> SEQUENCE: 13
178 caactttatt atacaaagtt gt                                   22
181 <210> SEQ ID NO: 14
182 <211> LENGTH: 27
183 <212> TYPE: DNA
184 <213> ORGANISM: Artificial
186 <220> FEATURE:
187 <223> OTHER INFORMATION: attP5
189 <400> SEQUENCE: 14
190 gttcaacttt attatacaaa gttggca                              27
193 <210> SEQ ID NO: 15
194 <211> LENGTH: 24
195 <212> TYPE: DNA
196 <213> ORGANISM: Artificial
198 <220> FEATURE:
199 <223> OTHER INFORMATION: attL5
201 <400> SEQUENCE: 15
202 caactttatt atacaaagtt ggca                                 24
205 <210> SEQ ID NO: 16
206 <211> LENGTH: 25
207 <212> TYPE: DNA
208 <213> ORGANISM: Artificial
210 <220> FEATURE:
211 <223> OTHER INFORMATION: attR5
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RAW SEQUENCE LISTING   DATE: 03/13/2007
PATENT APPLICATION: US/09/732,914B   TIME: 15:43:47

Input Set : N:\efs\03_12_07\09732914B_efs\IVGN251_ST25.txt
Output Set: N:\CRF4\03132007\I732914B.raw

213 <400> SEQUENCE: 16
214 gttcaacttt attatacaaa gttgt
217 <210> SEQ ID NO: 17
218 <211> LENGTH: 22
219 <212> TYPE: DNA
220 <213> ORGANISM: Artificial
222 <220> FEATURE:
223 <223> OTHER INFORMATION: attB11
225 <400> SEQUENCE: 17
226 caactttttct atacaaagtt gt   22
229 <210> SEQ ID NO: 18
230 <211> LENGTH: 27
231 <212> TYPE: DNA
232 <213> ORGANISM: Artificial
234 <220> FEATURE:
235 <223> OTHER INFORMATION: attP11
237 <400> SEQUENCE: 18
238 gttcaacttt tctatacaaa gttggca   27
241 <210> SEQ ID NO: 19
242 <211> LENGTH: 24
243 <212> TYPE: DNA
244 <213> ORGANISM: Artificial
246 <220> FEATURE:
247 <223> OTHER INFORMATION: attL11
249 <400> SEQUENCE: 19
250 caactttttct atacaaagtt ggca   24
253 <210> SEQ ID NO: 20
254 <211> LENGTH: 25
255 <212> TYPE: DNA
256 <213> ORGANISM: Artificial
258 <220> FEATURE:
259 <223> OTHER INFORMATION: attR11
261 <400> SEQUENCE: 20
262 gttcaacttt tctatacaaa gttgt   25
265 <210> SEQ ID NO: 21
266 <211> LENGTH: 22
267 <212> TYPE: DNA
268 <213> ORGANISM: Artificial
270 <220> FEATURE:
271 <223> OTHER INFORMATION: attB17
273 <400> SEQUENCE: 21
274 caactttttgt atacaaagtt gt   22
277 <210> SEQ ID NO: 22
278 <211> LENGTH: 27
279 <212> TYPE: DNA
280 <213> ORGANISM: Artificial
282 <220> FEATURE:
283 <223> OTHER INFORMATION: attP17
285 <400> SEQUENCE: 22

```
286 gttcaacttt tgtatacaaa gttggca
289 <210> SEQ ID NO: 23
290 <211> LENGTH: 24
291 <212> TYPE: DNA
292 <213> ORGANISM: Artificial
294 <220> FEATURE:
295 <223> OTHER INFORMATION: attL17
297 <400> SEQUENCE: 23
298 caacttttgt atacaaagtt ggca                                    24
301 <210> SEQ ID NO: 24
302 <211> LENGTH: 25
303 <212> TYPE: DNA
304 <213> ORGANISM: Artificial
306 <220> FEATURE:
307 <223> OTHER INFORMATION: attR17
309 <400> SEQUENCE: 24
310 gttcaacttt tgtatacaaa gttgt                                   25
313 <210> SEQ ID NO: 25
314 <211> LENGTH: 22
315 <212> TYPE: DNA
316 <213> ORGANISM: Artificial
318 <220> FEATURE:
319 <223> OTHER INFORMATION: attB19
321 <400> SEQUENCE: 25
322 caactttttc gtacaaagtt gt                                      22
325 <210> SEQ ID NO: 26
326 <211> LENGTH: 27
327 <212> TYPE: DNA
328 <213> ORGANISM: Artificial
330 <220> FEATURE:
331 <223> OTHER INFORMATION: attP19
333 <400> SEQUENCE: 26
334 gttcaacttt ttcgtacaaa gttggca                                 27
337 <210> SEQ ID NO: 27
338 <211> LENGTH: 24
339 <212> TYPE: DNA
340 <213> ORGANISM: Artificial
342 <220> FEATURE:
343 <223> OTHER INFORMATION: attL19
345 <400> SEQUENCE: 27
346 caactttttc gtacaaagtt ggca                                    24
349 <210> SEQ ID NO: 28
350 <211> LENGTH: 25
351 <212> TYPE: DNA
352 <213> ORGANISM: Artificial
354 <220> FEATURE:
355 <223> OTHER INFORMATION: attR19
357 <400> SEQUENCE: 28
358 gttcaacttt ttcgtacaaa gttgt                                   25
```

[Handwritten annotations:] "same errors" 27

"The type of errors shown exist throughout the Sequence listing Please check subsequent Sequences for similar errors."

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 03/13/2007
PATENT APPLICATION: US/09/732,914B   TIME: 15:43:48

Input Set : **N:\efs\03_12_07\09732914B_efs\IVGN251_ST25.txt**
Output Set: **N:\CRF4\03132007\I732914B.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:39; N Pos. 8,9,10,11,12,13,14
Seq#:40; N Pos. 8,9,10,11,12,13,14
Seq#:94; N Pos. 7,8,10,11,12,14,15
Seq#:106; N Pos. 20,21,22,23,24
Seq#:107; N Pos. 25,26,27,28,29
Seq#:108; N Pos. 20,21,22,23,24
Seq#:109; N Pos. 25,26,27,28,29
Seq#:110; N Pos. 27,28
Seq#:113; N Pos. 26
Seq#:114; N Pos. 27,28
Seq#:117; N Pos. 27
Seq#:139; N Pos. 13,14
Seq#:140; N Pos. 13

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7,8,9,10,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28
Seq#:29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52
Seq#:53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76
Seq#:77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100
Seq#:101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118
Seq#:119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136
Seq#:137,138,139,140,141

VERIFICATION SUMMARY   DATE: 03/13/2007
PATENT APPLICATION: **US/09/732,914B**   TIME: 15:43:48

Input Set : **N:\efs\03_12_07\09732914B_efs\IVGN251_ST25.txt**
Output Set: **N:\CRF4\03132007\I732914B.raw**

```
L:496 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:0
L:514 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:0
L:1168 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:94 after pos.:0
L:1318 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106 after pos.:0
L:1336 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:107 after pos.:0
L:1354 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:108 after pos.:0
L:1372 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109 after pos.:0
L:1390 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:110 after pos.:0
L:1436 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:113 after pos.:0
L:1454 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:114 after pos.:0
L:1496 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:117 after pos.:0
L:1766 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:139 after pos.:0
L:1784 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:140 after pos.:0
```